

REMARKS

The title is objected to as allegedly being non-descriptive. It is respectfully submitted that the enclosed amendment obviates this informality. Accordingly, it is respectfully requested that this objection be withdrawn.

Claim 1 is independent and stands rejected under 35 U.S.C. § 103 as being unpatentable over JP '183 (English equivalent is US Pub. 2004/0058243; references below regarding JP '183 correspond to the US Pub. paragraphs, hereinafter Ohzuku) in view of Takahashi '039. This rejection is respectfully traversed for the following reasons.

Claim 1 recites in pertinent part, "wherein said positive electrode comprises a positive electrode active material comprising a particle of a composite oxide represented by a general formula: $\text{Li}_x\text{Me}_{1-y-z}\text{M}_y\text{L}_z\text{O}_2$, where said element Me is at least one transition metal element except Ti, Mn, Y and Zr, said element M is at least one selected from the group consisting of Mg, Ti, and Zn ..., said element M is uniformly distributed in said particle, and said element L is distributed more in a surface portion of said particle than an inside of said particle, said general formula satisfies $1 \leq x \leq 1.05$, $0.005 \leq y \leq 0.1$ and $0 < z \leq 0.05$ " (emphasis added).

As a preliminary matter, it is respectfully submitted that Ohzuku does not inherently disclose the claimed compositional configuration, noting that "inherency may not be established by probabilities or possibilities" (*Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)). Specifically, in one exemplary embodiment of the present invention, the claimed arrangement of elements M and L in the particles can be obtained by mixing elements M and L using two

different steps (coprecipitation for uniformity of M *and* external addition for unevenness of L).

In contrast, paragraph 80 of Ohzuku (emphasis added) expressly discloses:

an appropriate amount of aluminum source such as aluminum hydroxide is *simultaneously* added when an eutectic oxide of nickel and manganese obtained by the aforesaid coprecipitation is mixed with lithium hydroxide, which is then baked.

Accordingly, the processes used to achieve the arrangement of elements M and L are different between the present invention (two different steps of coprecipitation and external addition) and Ohzuku (one simultaneous step of coprecipitation), noting that Ohzuku distinguishes its coprecipitation process from conventional coprecipitation processes (*see* paragraph 68), so that Ohzuku does not inherently disclose the claimed compositional configuration.

Nonetheless, it is respectfully submitted that Ohzuku does not disclose or suggest the claimed composition, noting that the Examiner relies solely on Ohzuku therefor. Specifically, with regard to the claimed composition ranges x, y, z, Ohzuku expressly discloses a strict requirement for an atomic ratio for elements Me:M of 2:1 (*see* paragraphs 41, 78) in which manganese is an essential element. Such a ratio falls far outside of the claimed general formula for "y." Moreover, it is respectfully submitted that Ohzuku does not disclose or suggest element M, much less suggest the specific ratio therefor as set forth in the claimed compositional *combination*. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970). Based on the foregoing, it is respectfully submitted that the proposed combination of cited prior art does not disclose or suggest each and every limitation recited in claim 1.

In this regard, it is respectfully submitted that the claimed compositional combination of Me and M and the relative amounts thereof can provide new and unexpected results as described

throughout Applicants' specification. For example, as admitted by the Examiner, Ohzuku does not disclose a separator comprising a plurality of laminated monolayer films which can include polypropylene *in combination* with the specifically claimed combination $\text{Li}_x\text{Me}_{1-y-z}\text{M}_y\text{L}_z\text{O}_2$ and its associated element ratios.

Turning to Table 3 in Applicants' specification, battery B1 which does not include the claimed composition and battery B8 which does not include the claimed separator effect significantly reduced recovery rates after constant voltage storage, as compared to battery A4 including *both* the novel composition and separator in combination. For example, when charged to 4.4V, the novel battery A4 embodied by the present invention can exhibit a recovery rate of 72%, whereas battery B1 exhibited a recovery rate of only 28% and battery B8 exhibited a recovery rate of only 15%. Only Applicants have recognized and considered the aforementioned effects, and conceived of a novel and non-obvious combination which can make it possible to realize said effects.

Claim 1 is also rejected under 35 U.S.C. § 103 as being unpatentable over the technical publication authored by Pouillier et al. in view of Ohzuku and Takahashi '039. As this rejection is based on the same rationale used in the first rejection with respect to Ohzuku and Takahashi, this rejection is respectfully traversed for at least the same reasons discussed above with respect to the first rejection.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable.

In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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